In the Claims

The claims currently pending in the application are as follows:

1. (cancelled)

2. (currently amended) The band-pass filter of claim 3, in which the acoustic decoupler is structured to provide substantially critical coupling of acoustic energy between the FBARs.

3. (currently amended) A band-pass filter characterized by a center frequency, the band-pass filter comprising:

a stacked pair of film bulk acoustic resonators (FBARs), each of the FBARs comprising opposed planar electrodes and a layer of piezoelectric material between the electrodes; and

an acoustic decoupler between the FBARs, the acoustic decoupler comprising a single layer of acoustic decoupling material having a nominal thickness equal to an odd integral multiple of one quarter of the wavelength in the acoustic decoupling material of an acoustic wave having a frequency equal to the center frequency, the acoustic decoupling material comprising plastic.

4. (original) The band-pass filter of claim 3, in which:

the piezoelectric material has an acoustic impedance; and

the acoustic decoupling material has an acoustic impedance less than the acoustic impedance of the piezoelectric material.

5. (original) The band-pass filter of claim 3, in which:

the piezoelectric material has an acoustic impedance; and

the acoustic decoupling material has an acoustic impedance intermediate between the acoustic impedance of the piezoelectric material and the acoustic impedance of air.

6. (original) The band-pass filter of claim 3, in which the acoustic decoupling material has an acoustic impedance in the range from about 2 Mrayl to about 16 Mrayl.

7. (cancelled)

8. (original) The band-pass filter of claim 3, in which the acoustic decoupling material comprises polyimide.

9. (original) The band-pass filter of claim 3, in which the acoustic decoupling material comprises poly(para-xylylene).

10. (cancelled)

11. (currently amended) The band-pass filter of claim ~~10,~~19, in which the acoustic decoupling material comprises plastic.

12. (currently amended) The band-pass filter of claim ~~10,~~19, in which the acoustic decoupling material comprises polyimide.

13. (currently amended) The band-pass filter of claim ~~10,~~19, in which the acoustic decoupling material comprises poly(para-xylylene).

14. (previously presented) The band-pass filter of claim 3, in which:

the layer of acoustic decoupling material has a nominal thickness equal to one quarter of the wavelength in the acoustic decoupling material of an acoustic wave having a frequency equal to the center frequency.

15. (cancelled).

16. (cancelled)

17. (cancelled).

18. (cancelled)

19. (currently amended) A band-pass filter characterized by a center frequency, the ~~The~~ band-pass filter ~~of claim 3 additionally~~ comprising:

a stacked pair of film bulk acoustic resonators (FBARs), each of the FBARs comprising opposed planar electrodes and a layer of piezoelectric material between the electrodes;

an acoustic decoupler between the FBARs, the acoustic decoupler comprising a single layer of acoustic decoupling material having a nominal thickness equal to an odd integral multiple of one quarter of the wavelength in the acoustic decoupling material of an acoustic wave having a frequency equal to the center frequency; and

an electrical connection between adjacent ones of the electrodes of the FBARs.

20. (original) The band-pass filter of claim 19, in which the acoustic decoupler is located between the adjacent ones of the electrodes.

21. (previously presented) The band-pass filter of claim 3, additionally comprising a ladder filter electrically connected in series with the stacked pair of FBARs.

22. (original) The band-pass filter of claim 21, in which the ladder filter comprises additional FBARs.

23. (previously presented) A band-pass filter, comprising:

a stacked pair of film bulk acoustic resonators (FBARs), each of the FBARs comprising opposed planar electrodes and a layer of piezoelectric material between the electrodes;

an acoustic decoupler between the FBARs; and

a ladder filter comprising additional FBARs, the ladder filter electrically connected in series with the stacked pair of FBARs, in which:

the band-pass filter additionally comprises an electrical connection between adjacent ones of the electrodes of the stacked pair of FBARs and the ladder filter; and

the remaining ones of the electrodes of the stacked pair of FBARs provide the output terminals of the band-pass filter.

24. (currently amended) A band-pass filter characterized by a center frequency, the band-pass filter comprising:

a stacked pair of film bulk acoustic resonators (FBARs), each of the FBARs comprising opposed planar electrodes and a layer of piezoelectric material between the electrodes, the piezoelectric material having an acoustic impedance; and

between the FBARs, a single layer of acoustic decoupling material having a nominal thickness equal to an odd integral multiple of one quarter of the wavelength in the acoustic decoupling material of an acoustic wave having a frequency equal to the center frequency, the acoustic decoupling material comprising plastic having an acoustic impedance less than the acoustic impedance of the piezoelectric material.

25. (original) The band-pass filter of claim 24, in which the acoustic decoupling material comprises one of polyimide and poly(para-xylylene).

26. (currently amended) An electrical filtering method, comprising:

providing a pair of film bulk acoustic resonators (FBARs);

applying an input electrical signal to one of the FBARs;

coupling, by no more than one layer of acoustic decoupling material located between the FBARs, less acoustic energy between the FBARs than would be coupled by direct contact between the FBARs, the acoustic decoupling material comprising plastic; and

outputting a filtered output electrical signal from the other of the FBARs.

27. (previously presented) An electrical filtering method, comprising:

providing a pair of film bulk acoustic resonators (FBARs);

applying an input electrical signal to one of the FBARs;

coupling less acoustic energy between the FBARs than would be coupled by direct contact between the FBARs, the coupling establishes a first pass bandwidth;

prior to the applying, filtering the input electrical signal with a second pass bandwidth narrower than the first pass bandwidth; and

outputting a filtered output electrical signal from the other of the FBARs.

28. (cancelled)

29. (cancelled)

30. (cancelled)